

REMARKS

Claims 1-21 are pending. Upon entry of this amendment, claims 8 and 14 will be amended. The amendment introduces no new matter. No claims will be added or canceled. Claims 1, 10, 12, and 16 are the independent claims.

Allowable subject matter

Applicant appreciates the Office Action's indication of allowable subject matter in claims 15 and 20.

Telephonic interview

Applicant appreciates Examiner Panwalkar's time and attention during a telephonic interview with Applicant's undersigned representative in which claim 1 was discussed in light U.S. Patent No. 5,983,388 to Friedman *et al.*.

Claim rejection under 35 U.S.C. § 112, second paragraph

Claims 8 and 14 stand rejected under 35 U.S.C. § 112, second paragraph. The Office Action indicates that the recitation of "adaptive algorithms" is unclear. Applicant has amended claims 8 and 14 to remove that language. Applicant respectfully requests that the rejection of claims 8 and 14 under 35 U.S.C. § 112, second paragraph be withdrawn.

Double patenting

Claims 1, 2, 4, 7, 8, 10, 11, 12, 13, 14, 16, 17 and 19 stand rejected on the grounds of nonstatutory obvious-type double patenting that may be overcome with a timely filed terminal disclaimer. A terminal disclaimer is filed herewith. Applicant respectfully request that the rejection of claims 1, 2, 4, 7, 8, 10, 11, 12, 13, 14, 16, 17 and 19 on the grounds of nonstatutory obvious-type double patenting be withdrawn.

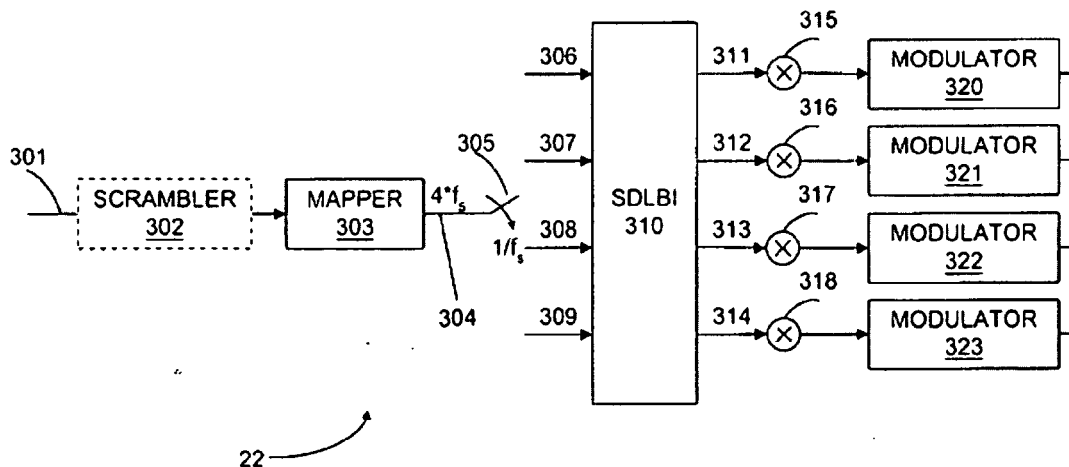
Rejection under 35 U.S.C. § 103 (a)

Claims 1-3, 5, 9-13, 16-18 and 20 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Patent No. 5,983,388 to Friedman *et al.* ("Friedman") in view of

U.S. Patent No. 6,018,545 to Fukumasa *et al.* ("Fukumasa"). Claims 4, 6, and 19 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over Friedman in view of Fukumasa in further view of U.S. Patent No. 5,291,298 to Hulyalkar *et al.* ("Hulyalkar"). Claim 7 stands rejected under 35 U.S.C. 103(a) as allegedly being obvious over Friedman in view of Fukumasa in further view of U.S. Patent No. 5,805,583 to Rakib ("Rakib").

The claims patentably define over the cited references because the cited references do not teach or suggest **combining** a time series of N input symbols into a block of N output symbols, as claimed. The Office Action cites Friedman for this feature, but Friedman does not combine symbols at all. Rather, Friedman, as shown in FIG. 1, takes three independent input data streams and communicates them to three independent outputs, not combined in any way.

For an illustrative example, consider FIG. 3 of the present application (reproduced in part below) in which an N-bit word of data is input on line 301 (*Specification* ¶ 034). A commutator switch 305 splits that time series stream of input symbols into the N inputs of a space diversified linear block interleaver 310 (*Specification* ¶ 037). The space diversified linear block interleaver 310 combines the N symbols to form an interleaved block of N symbols on lines 311-314 (*Specification* ¶ 038). For example, the symbol outputted on line 311 is a combination of the symbols inputted at lines 306-309.



In contrast, FIG. 1 of Friedman (reproduced below, with modification by Applicant for explanation) shows three parallel inputs 102₁-102₃, each being separately transmitted over a channel and being separately decoded at the output. No time series of data in Friedman is combined into a block of output symbols. Rather, each time series of data is separately and independently transmitted to the output. Each stream remains independent and separate, and each data symbol communicated in each stream is sent to the output without being combined with any other symbol.

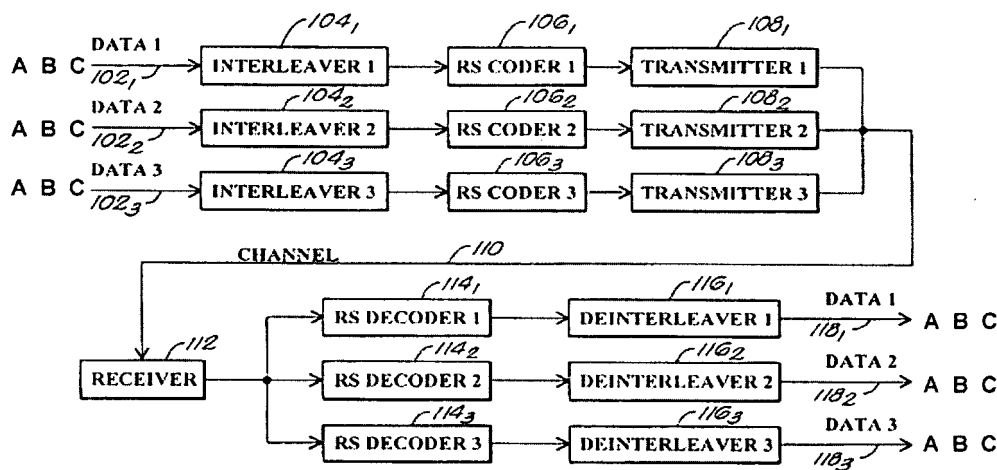


FIG. 1

The Office Action asserts that that it would have been obvious for Friedman's data streams to be identical (*Office Action* dated 10/20/2008, p. 3), and the Office Action asserts that the modified Friedman when combined with the other references teaches the claimed invention. However, there is no teaching in Friedman or the other cited references to support the proposed modification. In fact, Friedman's FIG. 1 system is a *multiuser system*, where each independent stream may have a *different* data rate that is adjusted for each user's individual needs. That the Friedman data streams have data rates that are *different* explicitly teaches away from having them be identical. Thus, it would not have been obvious to modify Friedman's *multiuser* system to have identical streams. Accordingly, the Office Action fails to present a *prima facie* case of obviousness.

However, even assuming, *arguendo*, that Friedman could be modified with identical streams, the proposed modification still does not *combine* a time series of N input symbols

into a block of N output symbols, as claimed, because *no combination is happening at all*. Friedman's independent data streams, even being identical, are no less independent.

To illustrate, assume that a three data symbol stream ("A B C") is received on input 102₁, and, as suggested in the Office Action, that identical streams are present on inputs 102₂ and 102₃. At the output, the output symbols are the same as they are at the input, no combination occurs at all. Moreover, it is improper to *group* the symbols at each of the three outputs and call them collectively an "output symbol" as claimed. There is no teaching in Friedman that such a grouping occurs. There is no rational reason to consider the output data in Friedman to be anything more than it is, which is three independent streams of data that exactly correspond to three independent input streams. There is no teaching in Friedman or the other cited references that these data streams should be combined into a block output, as claimed.

No other disclosure of Friedman or the other cited references teach or suggest *combining* a time series of N input symbols into a block of output symbols, as claimed. Accordingly, Applicant respectfully submits that the claims patentably define over the cited references. In view of the above amendments and remarks, Applicant respectfully submits that the present application is in condition for allowance and requests a Notice of Allowance for claims 1-21.

Date: January 21, 2009

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